UNITED STATES PATENT AND TRADEMARK OFFICE

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10/725,298	12/01/2003	George V. Popescu	YOR920030523US1	2858

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EXAMINER
MEJIA, ANTHONY

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 05 June 2008.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
     closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-13* is/are pending in the application.
   4a) Of the above claim(s) *11-13* is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-5 and 7-10* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *01 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
           application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date *06/16/2008*.

4) ☐ Interview Summary (PTO-413)
      Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   Acknowledgement is made that Claims 1-5 have been amended and are

pending along with Claims 7-10. Also, Claims 6, and 14-20 have been cancelled,

and Claims 11-13 have been withdrawn in the instant application.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

3.   Claims 1-2, and 7-9 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Grimm et al. (US 5,828,843) (referred herein after as Grimm)

in further view of George et al. (US 6,944,645) (referred herein after as George)

and yet in further view of Modiri et al. (US 6,192,401) (referred herein after as

Modiri).

        Regarding Claim 1, Grimm teaches a method comprising the steps of:

        obtaining a user's communication interest (e.g., user's clients are selected

into matched sets based on obtained attributes of the client users, application,

and the attributes of the servers are compared through a vector of different

network properties, col. 1, lines 60-64, col.4 lines 38-48, 63-68, and col.8, lines

41-45).

        obtaining network attributes (e.g., communication attributes, col.3, lines

33-37);

obtaining application attributes (e.g., match making system takes into account users preferences and attributes, col. 2, lines 5-6, and as discussed in col.3, lines 7-8).

Although Grimm teaches obtaining user communication interest as discussed above, Grimm does not explicitly teach wherein the communication interest is represented by at least one of: a user request for a content update *or* a user subscription to a specific data item *or* to a set of proximal data sources.

However, George in a similar field of discloses a method and system for customizing electronic communications including wherein a communication interest of a user is represented by a user request for content update (changing a customer's requested mailing date because new information has been loaded into the content database, col.5, lines 3-8) or user subscription (subscription) to a specific data item (newsletter), or to a set of proximal data sources (based on the demographic and public information obtained, one of ordinary skill in the art at the time the invention was made, would appreciate that a proximal data source may then be located based on this obtained data), (col.3, lines 3-9, 15-31, 38-47, and col.4, lines 57-63).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of George in Grimm in order to properly measure the similarities of users' communications interests. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Grimm and George to enrich the

interaction between the participants (e.g., vendors/users) of the system (George: col.5, lines 16-19).

In further, the combined teachings of Grimm and George do not explicitly teach forming a multi-type feature vector based on the communication interest, network attributes, and application attributes.

However, Modiri in a similar field of endeavor discloses a system and method for determining cluster membership in a heterogeneous distributed system, including the step forming a feature vector (e.g., weighting values, based on the user's communication interest, network attributes, and application attributes (several factors) are calculated and combined (col.2, lines 41-44, lines 56-62, and col.6, lines 45-60) based on the obtained attributes.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Modiri in Grimm/George in order to determine a configuration for the nodes on a network. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Grimm/George and Modiri to help satisfy the desirability of having an optimized way in determining the membership for the nodes in the cluster (Modiri: col.2, lines 13-15).

Regarding Claim 2, the combined teachings of Grimm/George and Modiri teach a method of clustering comprising the steps of:

obtaining network attributes (Grimm: e.g., communication attributes, col.3, lines 33-37) from a network having a plurality of nodes (Grimm: e.g., each user

client computer(s) is connected to a single server or multiple servers);

obtaining application attributes of an application (Grimm: e.g., match

making system takes into account users preferences and attributes, col. 2, lines

5-6, and as discussed in col.3, lines 7-8).

Although Grimm teaches obtaining user communication interest as

discussed above, Grimm does not explicitly teach wherein the communication

interest is represented by at least one of: a user request for a content update *or* a

user subscription to a specific data item *or* to a set of proximal data sources.

However, George in a similar field of discloses a method and system for

customizing electronic communications including wherein a communication

interest of a user is represented by a user request for content update (changing a

customer's requested mailing date because new information has been loaded

into the content database, col.5, lines 3-8) or user subscription (subscription) to a

specific data item (newsletter), or to a set of proximal data sources (based on the

demographic and public information obtained, one of ordinary skill in the art at

the time the invention was made, would appreciate that a proximal data source

may then be located based on this obtained data), (col.3, lines 3-9, 15-31, 38-47,

and col.4, lines 57-63).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of George in Grimm in order to

properly measure the similarities of users' communications interests. One of

ordinary skill in the art at the time the invention was made would have been

motivated to combine the teachings of Grimm and George to enrich the

interaction between the participants (e.g., vendors/users) of the system (George: col.5, lines 16-19).

In further, the combined teachings of Grimm and George do not explicitly teach forming a multi-type vector space based on the network attributes, and application attributes and user communication interest.

However, Modiri in a similar field of endeavor discloses a system and method for determining cluster membership in a heterogeneous distributed system, including the steps of:

forming a multi-type vector space (Modiri: e.g., weighting values, based on user communication interest, network attributes, and application attributes (several factors) are calculated and combined for membership, col.2, lines 41-44, lines 56-62, and col.6, lines 45-60); and

clustering (e.g., configuring) the network nodes based on the obtained attributes (Modiri: e.g., weighting values based on network attributes, application attributes, communication interest (several factors) of each node are calculated to choose an optimal configuration by clustering (configuring) the network nodes into a membership, col.2, lines 25-29 and 57-59, col.7, lines 8, lines 1-15)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Modiri in Grimm/George in order to configure the nodes to a particular desired group or membership. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Grimm/George and Modiri to help satisfy the desirability of having an optimized way in determining the membership for

the nodes in the cluster (Modiri: col.2, lines 13-15).

Regarding Claim 7, the combined teachings of Grimm/George/Modiri teach the method of claim 2 as discussed above. Grimm further teaches obtaining application attributes (e.g., match making system takes into account users preferences and attributes, col. 2, lines 5-6, and as discussed in col.3, lines 7-8) includes obtaining information regarding collaborative usage of the application (e.g., the matchmaker will choose a server if multiple servers are available and if the network application requires it. The moderator inherits the class attributes of the application when a match offer is created, col.3, lines 49-57).

Regarding Claim 8, the combined teachings of Grimm/George/Modiri teach the method of claim 2 as discussed above. Grimm further teaches obtaining network path loss information (e.g., packet-loss rate, col.8, lines 65-66), and such that clustering is based on the path loss information (e.g., match maker will consider network path loss (packet-loss rate) as part of matching up clients, col.9, lines. 12-16).

Regarding Claim 9, the combined teachings of Grimm/George/Modiri teach the method of claim 2 as discussed above, wherein the method further includes the step such that clustering (Grimm: e.g., match making bandwidth attributes with all the current clients, col.7, lines 49-51) is based on bandwidth

constraints (Grimm: e.g., requirements (bandwidth)) necessary for data, col. 7,

lines 36-39).

4.   Claims 3-4, and 15-16 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Grimm in further view of Modiri, and yet in further view of

Johnson (US. 6,078,946) (referred herein after as Johnson)

        Regarding Claim 3, the combined teachings of Grimm/George/Modiri

teach the method of claim 2 as discussed above. The combined teachings of

Grimm/George/Modiri do not explicitly teach clustering that is performed by a

fusion method in which one or more plurality of nodes are clustered in each

attribute space on subspace classifiers.

        However Johnson, in a similar field of endeavor, teaches a system and

method for management of connection oriented networks including the step of:

        clustering that is performed by a fusion method (where a fusion method is

interpreted as being a subspace classification) in which one or more of said

pluralities of nodes are clustered in each attribute space on subspace classifiers

(col.10, lines 14-16).

        It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of Johnson in Grimm/George/Modiri

in order to consider additional sub-attributes. One of the ordinary skill in the art at

the time the invention was made would have been motivated to combine the

teachings of both Johnson and Grimm/George/Modiri to produce effective

mutually dependent outcomes of the attributes used for the communication in the network.

Regarding Claim 4, the combined teachings of Grimm/George/Modiri teach the method of claim 2 as discussed above. The combined teachings of Grimm/George/Modiri do not explicitly teach wherein the method further includes the step wherein one of more plurality of said plurality of nodes clustering is performed by a nested method in which network nodes are initially clustered based on a sub-set of attributes and then re-clustered by iteratively considering additional attributes.

However Johnson, in a similar field of endeavor, teaches a system and method for management of connection oriented networks including the step of:

clustering is performed by a nested method in which network nodes are initially clustered based on a sub-set of attributes and then re-clustered by iteratively considering additional attributes (Johnson: e.g., the sub-classes are already nested within classes, but the comparison of the sub-classes will be considered as an aspect of determination of the best classes, which would include their attributes, col.10, lines 20-24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Johnson in the teachings of Grimm/George/Modiri in order to implement additional attributes need for clustering. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Johnson/ Grimm/George/Modiri to help optimize the interaction between the participants of

the system by implementing the additional clustering within the cluster to

determine the best case for the participants of the system.

5.   Claims 5, and 17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Grimm in further view of George and Modiri, and yet in further

view of Solotorevsky (US 2005/0010571) (referred herein after as Solotorevsky)

        Regarding Claim 5, the combined teachings of Grimm/George/Modiri

teach the method of claim 2 as discussed above. The combined teachings of

Grimm/George/Modiri do not explicitly teach wherein the method comprises the

steps of forming network delay maps and on the forward capacity maps from the

obtained network attributes, and such that clustering is based on the formed

network delay maps and on forward capacity maps.

        However, Solotorevsky, in a similar field of endeavor, such as a system

and method for generating policies for a communication network, discloses

wherein further comprising forming forward capacity maps (e.g., maps calculated

requirements such as forward capacity (e.g., bandwidth capacity) in a graphical

representation of the network, par [0056], as demonstrated in fig.3 and network

delay maps (e.g., delay, if is a network requirement that is calculated, may also

be demonstrated in a graphical representation of the network as discussed in par

[0060]), such that clustering is based on the formed network delay maps and on

forward capacity maps (e.g., for each expected network requirement, each

expected network requirement may be mapped to the elements of the symbolic

network representation and its probability to demand the type of use it needs

may be derived from (e.g., delay and bandwidth capacity), par [0060]).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of Solotorevsky in

Grimm/George/Modiri to be able to have a symbolic representation of the

constraints on the network. One of the ordinary skill in the art at the time the

invention was made, would have been motivated to combine the teachings of

Grimm/George/Modiri and Solotorevsky to be able to visually analyze a network

map based on the specific network attributes and constraints that were obtained.

6.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Grimm in further view of George and Modiri, and yet in further view of Tang et al.

(US 2005/0076137) (referred herein after as Tang)

Regarding Claim 10, the combined teachings of Grimm/George/Modiri

teach the method of claim 2 as described above. The combined teachings of

Grimm/George/Modiri do not explicitly teach wherein the method further

comprises the step of clustering is based on weighted distance function modeled

from normalized attribute subspace metrics.

However, Tang, in a similar field of endeavor, teaches a method of

utilizing proximity information in an overlay network, including wherein the

method further comprises the step of:

clustering is based on weighted distance function (e.g., RTT) modeled

from normalized attribute subspace metrics (par [0058]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Tang in Grimm/George/Modiri, in order to be able to be able to consider distance measurements. One of the ordinary skill of the art at the time the invention was made, would have been motivated to combine the teachings of Grimm/George/Modiri and Tang, to be able to determine the distance of the nodes within a network overlay.

Response to Amendments

7.   Amendment to the abstract in response to examiner's objection has been considered. The amendment obviates previously raised objection, as such this objection hereby withdrawn.

Amendment to the specification in response to examiner's objection has been considered. The amendment obviates previously raised objection, as such this objection hereby withdrawn.

Response to Arguments

8.   Applicant's arguments filed 05 June 2008 have been fully considered but are deemed moot in view of the following new grounds of rejection as explained here below, necessitated by Applicant's substantial amendments (i.e., amendment of claim 1, *"...as represented by at least one of: a user request for a content update or a user subscription to a specific data item or to a set of proximal data sources"* and then *..."forming a feature vector or performing node*

clustering based in part on the communication interest") to the claims which

significantly affected the scope thereof.

A)   As to claims 1-2, Applicant alleges that claims 1-2 as amended is not

anticipated by Grimm and in further view of Modiri because the combined

teachings of Grimm and Modiri fail to teach or suggest the novel invention of

obtaining a user's communication interest as represented by at least one of: a

user request for a content update or a user subscription to a specific data item or

to a set of proximal data sources and then forming a feature vector performing

node clustering based in part on the communication interest.

As to the above point A), the Examiner agrees in that Claim 1 as amended

is not anticipated by the combined teachings of Grimm and in further view of

Modiri because the combined teachings of Grimm and Modiri are silent in

teaching obtaining a user's communication interest as represented by at least

one of: a user request for a content update or a user subscription to a specific

data item or to a set of proximal data sources and then forming a feature vector

performing node clustering based in part on the communication interest.

However, George in a similar field of discloses a method and system for

customizing electronic communications including wherein a communication

interest of a user is represented by a user request for content update (changing a

customer's requested mailing date because new information has been loaded

into the content database, col.5, lines 3-8) or user subscription (subscription) to a

specific data item (newsletter), or to a set of proximal data sources (based on the

demographic and public information obtained, one of ordinary skill in the art at

the time the invention was made, would appreciate that a proximal data source

may then be located based on this obtained data), (col.3, lines 3-9, 15-31, 38-47,

and col.4, lines 57-63).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of George in Grimm in order to

properly measure the similarities of users' communications interests. One of

ordinary skill in the art at the time the invention was made would have been

motivated to combine the teachings of Grimm and George to enrich the

interaction between the participants (e.g., vendors/users) of the system (George:

col.5, lines 16-19).

In further, the combined teachings of Grimm and George do not explicitly

teach forming a multi-type feature vector based on the communication interest,

network attributes, and application attributes.

However, Modiri in a similar field of endeavor discloses a system and

method for determining cluster membership in a heterogeneous distributed

system, including the step forming a feature vector (e.g., weighting values,

based on the user's communication interest, network attributes, and application

attributes (several factors) are calculated and combined (col.2, lines 41-44, lines

56-62, and col.6, lines 45-60) based on the obtained attributes.

It would have been obvious to one of ordinary skill in the art at the time

the invention was made to utilize the teachings of Modiri in Grimm/George in

order to determine a configuration for the nodes on a network. One of ordinary

skill in the art at the time the invention was made would have been motivated to

combine the teachings of Grimm/George and Modiri to help satisfy the

desirability of having an optimized way in determining the membership for the

nodes in the cluster (Modiri: col.2, lines 13-15). As to any arguments not

specifically addressed, they're the same as discussed above. As to the

arguments regarding claims 14-20, these arguments are moot since the claims

have been cancelled.

9.   Applicant's amendment necessitated the new ground(s) of rejection

presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as

set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire

THREE MONTHS from the mailing date of this action. In the event a first reply is

filed within TWO MONTHS of the mailing date of this final action and the advisory

action is not mailed until after the end of the THREE-MONTH shortened statutory

period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Conclusion

Examiner has cited particular paragraphs, columns, and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY MEJIA whose telephone number is (571)270-3630. The examiner can normally be reached on Mon-Thur 9:30AM-8:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-

9199 (IN USA OR CANADA) or 571-272-1000.

Anthony Mejia
Patent Examiner

/Salad Abdullahi/

Primary Examiner, Art Unit 2157